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The Dillman Total Design Survey Method: A Sure-Fire Way to Get High Survey Return Rates

SUMMARY

The Total Design Method (TDM) as offered by D.A. Dillman promises "guaranteed" 80% return rates for mail and telephone surveys. In a survey conducted in London, Ontario, a booklet-type questionnaire, introductory letter, return postcard and return stamped envelope were mailed to 185 family physicians. Non-responders were followed up one week after the initial mail-out with a reminder postcard, and three and seven weeks after the initial mail-out with replacement questionnaires. A return rate of 92.8% proved that the method was highly successful. The TDM is based on sound research principles and confirms that when attention is paid to administrative detail, high response rates can be achieved from difficult subjects. (*Can Fam Physician* 1986; 32:2366–2368.)

SOMMAIRE

La méthode dite « Total Design Method » (TDM) présentée par D.A. Dillman promet des taux de réponses « garantis » à 80 % dans le cas d'enquêtes effectuées soit par correspondance, soit par téléphone. Dans une étude menée à London, Ontario, 185 médecins de famille ont reçu un questionnaire sous forme de brochure, une lettre d'introduction, une carte de réponse et une enveloppe de retour affranchie. Ceux qui n'avaient pas répondu après une semaine ont reçu une carte de rappel et, après trois et sept semaines, un nouveau questionnaire. Un taux de réponse de 92,8 % a prouvé que ce procédé était très efficace. La méthode TDM est basée sur des principes de recherche solides et confirme qu'en se préoccupant du détail administratif, il est possible d'obtenir, même chez les sujets difficiles, des taux de réponse élevés.

Key words: Dillman Total Design Survey Method, research, surveys

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ANYONE PLANNING a survey would be glad to know of a sure-fire way to ensuring a high return rate. In his book[1] D.A. Dillman offers a survey method that promises that high return rate.[1] The book describes specific steps that if followed faithfully, are "guaranteed" to result in a 75%–80% return rate. A family physician with any experience in conducting surveys has learned to be skeptical of such claims, while an experienced researcher sees such a claim as a challenge to be tested.

Dillman's "cookbook" method was used in a survey of 185 family physicians in London, Ontario, where a high return rate was important. Minor deviations from the prescribed methodology appeared to have little negative effect on the study's return rate. A return rate of 92.8% showed that the method was highly successful.

The Dillman Total Design Survey Method consists of a series of precisely laid-out steps. The survey population is sent a questionnaire booklet containing as many as 12 pages. The booklet has an illustrated front cover and a specified instruction format, a means of identifying respondents to allow for removal of their names from the mailing list, and a return envelope. The covering letter, which clearly describes the purpose of the study and explains why the respondent's opinion is being sought, must be signed by hand, in blue ink. An optional return postcard contains the respondent's name and permits the questionnaire to be returned anonymously; alternatively, the questionnaires may be prenumbered.

Follow-up must proceed according to a set pattern. One week after the initial mail-out a reminder postcard is sent; three weeks and seven weeks after the initial mail-out, non-responders are sent duplicate packets. The seven-week packet is sent by registered mail.

Follow-up letters to non-responders are precisely formatted, and Dillman provides detailed advice on how to construct the questionnaire.

The methodology for conducting telephone surveys, while not tested by the authors, is as precisely described as the methodology for the mail-out survey. Indeed, Dillman's methods might be criticized on the ground that they are too rigid. While it is the nature of "how to" books to give exact instructions, experienced researchers should adapt the components of any method to their own situation. In our study we used a different questionnaire size from the one suggested, and we did not use certified or registered mail. These two departures from the Dillman method did not seem to affect the return rate adversely.

The Total Design Method as Used in the London Family-Practice Study

Our research team had an opportunity to assess the value of the Dillman Total Design Method during a recent assessment of the state of family practice in London, Ontario. This study was designed as a 10-year follow-up of a 1974 interview survey.[2] Because funds available for the second survey were limited, we decided that a mailed survey should replace the personal interview approach used in 1974.

While we realized that replication of the 99% response rate of the first survey was unlikely, we considered that it was important to achieve as high a response rate as possible. Dillman's survey method appeared likely to meet our need.

The 1984 Yellow Pages telephone book and the London District Academy of Medicine Directory were used to compile a list of 185 family physicians. The group was initially mailed a packet containing a questionnaire, covering letter, return postcard and return envelope. One week after the initial mail-out a reminder postcard was sent to non-responders. Three and seven weeks after the initial mail-out duplicate packets were sent to non-responders. Non-responders were sent a final appeal after 10 weeks, along with an abbreviated version of the questionnaire.

The packets were sent by first class mail to ensure prompt delivery.

The questionnaire was printed in a booklet form that measured 7″ × 8½″. On the top half of the front cover appeared the adults and child logo; the title, description of the study and instructions for returning the questionnaire appeared on the lower half. The instructions and some examples of how to complete the questionnaire were inside the front cover.

The introductory covering letters were printed on Department of Family Medicine letterhead by a word processor which integrated the letters with physicians' names and addresses, and gave each letter the appearance of being individually composed on the typewriter. Each letter was signed in blue ink by the principal investigator in the study.

The outgoing envelopes were white with the University of Western Ontario crest. The return address was placed in the upper left-hand corner.

The return envelopes were plain white printed with the university's return address. On one side of the return postcard was printed the return address and on the reverse was the sentence, "I have returned my questionnaire", a label containing the physician's name (from past experience we anticipated illegible signatures), and a box to tick if the respondent wished to be informed of the results of the study.

The one-week follow-up postcard contained a reminder and a thank-you message printed on one side. Each postcard was signed in blue ink by the principal investigator.

Results

Of the 185 physicians identified for the initial mail-out of the survey, five were dropped either because they had moved (n=3) or retired from practice (n=2), leaving a group of 180 family physicians.

Return rates were very high. (See Table 1.) Before the three-week follow-up mailing, the questionnaire return rate was higher than 74%, and after all the follow-ups were completed, the final return rate was 96.7%. If these return rates are compared with Dillman's predicted return rates (see Table 2) it is evident that our respondents replied in greater numbers after the initial mail-out, and that our overall response rate greatly exceeded Dillman's claims.

Discussion

Despite Dillman's instructions to stick precisely to the prescribed methodology, we found it necessary to deviate somewhat. Our questionnaire booklet was slightly larger than the size recommended by Dillman. To have followed his recommendations would have meant using specially sized paper with a resulting increase in our printing costs. Furthermore, we did not use certified or registered mail for the seven-week follow-up. The prohibitive charges of the Canadian postal service, as well as the potential inconvenience to respondents of having to pick up the letter if they missed delivery at the mailing address, deterred us. Similarly, in order to reduce our costs further, we mailed the one-week follow-up postcard only to those persons who had not responded after one week. Finally, because we believed that the last 13 non-responders might have found the questionnaire too long, we composed a considerably abbreviated questionnaire and mailed it out in a "last-ditch" appeal. Seven out of the remaining 13 non-responders must have found this version acceptable because they returned their completed forms.

While, on the whole, our survey proceeded smoothly, we did encounter some problems. We wanted to protect our respondents' anonymity and yet be able to remove their name from our mailing list on the receipt of their questionnaire. To accomplish this, we opted to use a postage-paid return postcard with an "I have returned my questionnaire" message, instead of pre-numbering the questionnaires. We also considered that it was important to offer the physicians prompt feedback on the results; for this reason we added a further statement that if they wished to be informed of the results of the study, they were to put a tick in the box provided. This last statement caused confusion for some of the physicians, who misread the card and thought that they should return the postcard only if they wanted the results. This problem was discovered in a routine follow-up of a selected group of physicians. Two changes were made for subsequent follow-ups. For some physicians, the label with the doctor's name on it was put over the misleading statement; for others, the "I have returned my questionnaire" statement was highlighted with a yellow marking pen. Both of these methods worked well and solved the problem. These return postcards, however, were the source of another problem. While they were stamped with first class postage, they did not appear to receive first class treatment by the post office. As shown in Table 1, the

postcard return rate consistently lagged behind the questionnaire return rate, and at one time there was a 9% difference between the two rates. In one case, where the respondent had identified himself on the questionnaire, there was a one month delay before his return postcard arrived. This lag led to frustration on the part of our respondents, who received further requests for the return of the supposedly uncompleted questionnaire. The study office received phone calls from some of the physicians to tell us that they had returned their questionnaire and to request that their name be taken off the mailing list. Considering that the study office and the physicians were in the same urban centre yet experienced such delays, one wonders what the Canadian postal service could do to a cross-country survey.

Unfamiliarity with stationery made the job of selecting appropriate envelopes and postcards more complex than it might have been. The involvement of experienced secretarial staff at the planning stages would have made the selection less confusing.

Our questionnaire was clearly worded, and there was little ambiguity about the nature of the answer required. As a result, during the pretest, the feedback from the test physicians indicated that they found the inclusion of instructions unnecessary and somewhat condescending. We now believe that the inclusion and structure of instructions should be modified, depending on the complexity of the questionnaire and the characteristics of the audience to whom it is directed.

The study described here was conducted within a small specialized population well acquainted with the principal investigator and the University of Western Ontario, and as a result the return rates were extremely high. However, subsequent studies using the Total Design Method to survey more broadly based populations and different geographic locations also appear to have had good returns to date. Table 3 shows the consistently high return rates of other studies originating in London involving either family physicians or patients. A questionnaire on prevention mailed to Ontario graduates of the UWO residency program achieved a return rate of 82%, as did a questionnaire on vaginitis mailed to female patients in London, Ontario. A national survey of family physicians dealing with ethical issues in family medicine achieved a 74.7% return rate.

Overall we found the Total Design Method very successful. The step-by-step instructions are clear and leave little doubt as to what to do next, and the prescribed routines allow for reduced staff and fewer mistakes in the follow-up process. The expansion of office technology to include word processing allows the "mass production" of individually typed letters and the merging of mailing lists with different letter formats for subsequent mail-outs.

Table 1
Cumulative Return Rates of Questionnaires and Postcards

Response Received	Cumulative Questionnaire Returns (N=180)	Cumulative Postcard Returns (N=180)
1st week after mail-out	40.6	33.3
2nd and 3rd week (after postcard reminder)	74.5	65.5
4th–7th week (after 3-week reminder)	88.4	84.4
8th–10th week (after 7-week reminder)	92.8	91.1
After "last-ditch" appeal	96.7	–
Total	**96.7%**	**91.1%**

Table 2
Distribution of Actual vs. Predicted Returns

Response Received	Total Design Method Studies	Our Study
In first week after initial mail-out	19–27%	40.6%
After postcard reminder but before 3-week follow-up	15–25%	33.9%
After 3-week and 7-week follow-up	23–30%	18.3%
Total	70–75%	92.8%

Table 3
Return Rates for Other London-Based Studies Using the Dillman Method

Population	Topic	Location	N	Return Rate
Family physicians	Prevention	Ontario	138	82.6%
Family physicians	Ethics	Canada	1,228	74.7%
Female patients	Vaginitis	London, Ont.	57	82.4%

Conclusions

Our research group believes that the Dillman Total Design Method is based on sound principles of survey research: give personal attention, be persistent and attract attention. It is an open question, however, whether the return rates will remain high as the population becomes more accustomed to the techniques used. Nevertheless, for the present the Total Design Method delivers!

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References

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